

Tech Talk

Application Performance Monitoring

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ARX Collaboration

Riverbed SteelCentral was originally purchased and implemented by GSA's Netops Team for monitoring Network Traffic.

PBS-ITS was able to utilize the same investment to monitor and optimize applications.



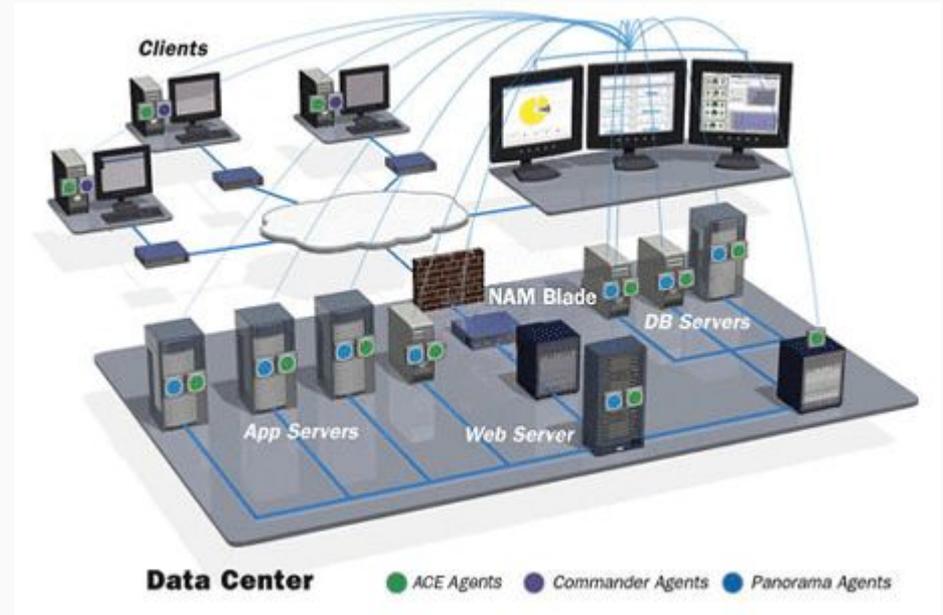
Why use ARX?

1. Rapidly identify and triage problem
2. Reduce “finger pointing” among IT teams
3. Detect emerging performance issues before users are impacted
4. Proactively manage usage and performance trends

How does Riverbed ARX Work?

Hardware Appliance installed at the Data Center passively monitors all network packets inbound / outbound.

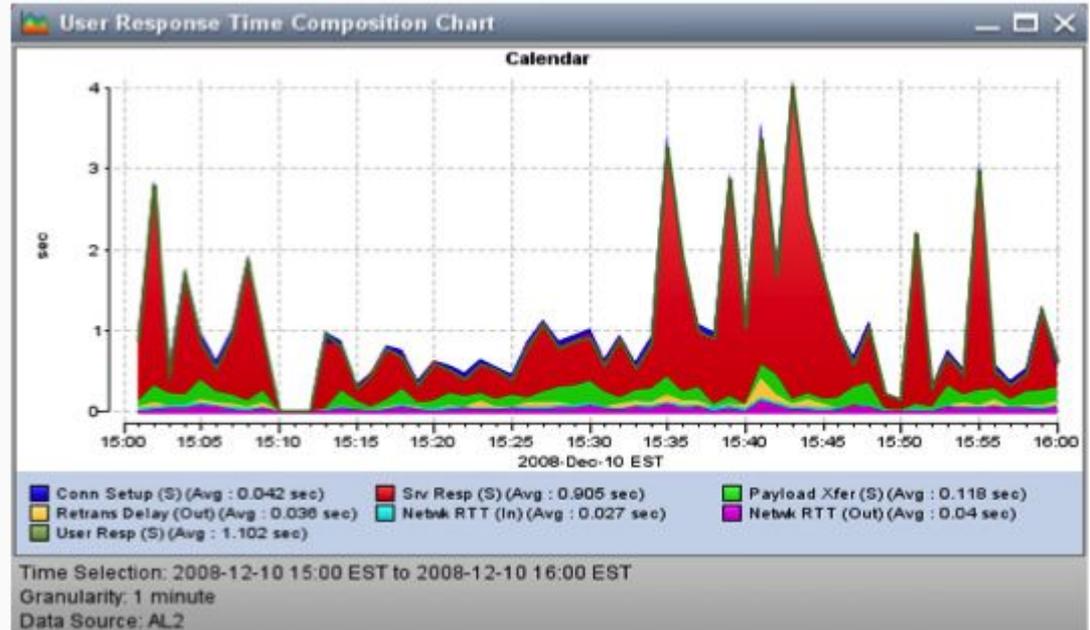
This allows the software to track and quantify round trip user response time to applications hosted in GSA data centers



How can Riverbed ARX isolate bottlenecks?

ARX can decipher packet sessions to determine if the user session is delayed due to:

- **Server Response Time**
- **Network Latency**
- **Large File Size**



What ARX Can't Monitor

- 1. Applications that have TLS Certificates on Web Server (not F5)**
 - Working with Security to allow importing of Private Keys
- 2. Applications in the Cloud, not located in GSA Data Centers**
 - Exploring other tools to monitoring Cloud-based applications

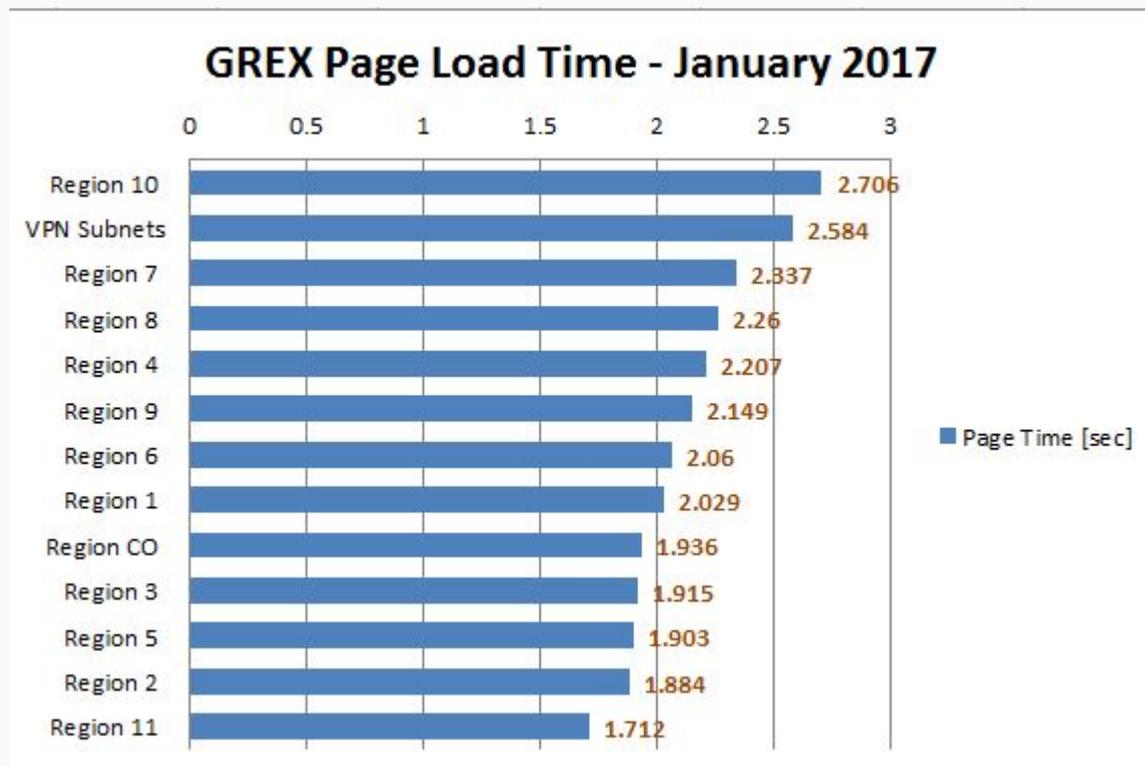
Overall Strategy for PBS Applications

1. **Measure** application performance to ensure PBS is getting the best application user experience for their IT investments.
2. **Identify** bottlenecks to correct sub-par user experience.
3. **Improve** our users' experience

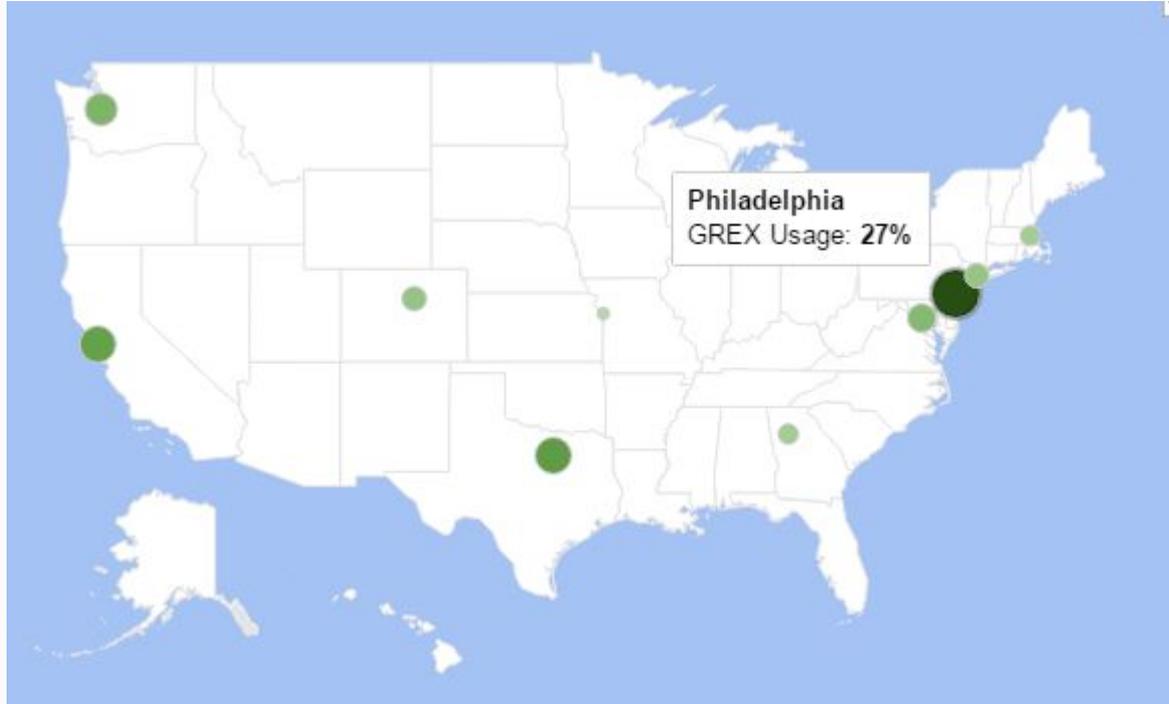
Metrics used to measure performance and usage

- **Average Page Load Time** - the amount of time it takes for a single page to load when a user clicks on link
- **Target Page Load Time**
 - Red - 5 seconds or more
 - Yellow - between 5 - 3.75 seconds
 - Green - less than 3.75 seconds
- **Number of Page Views**

GREX Page Load Time per Region



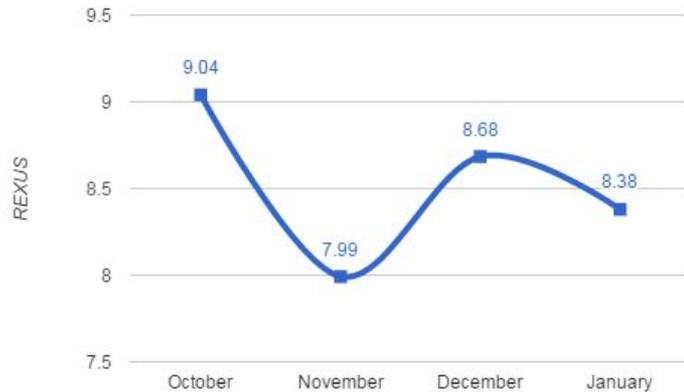
GREX Usage per ROB



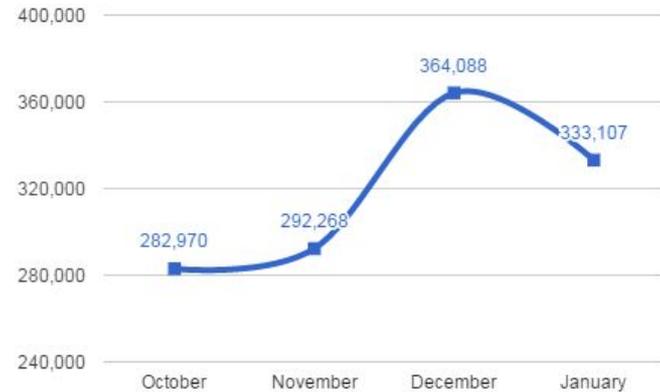
Region	USageUsage
Philadelphia	27%
Fort Worth	15%
San Francisco	14%
Auburn	10%
Chicago	9%
Washington DC	8%
Denver	5%
New York City	5%
Boston	3%
Atlanta	3%
Kansas City	0.04%

15% Overall Improvement in Application Performance

REXUS Page Load Time (sec)



REXUS Page Views



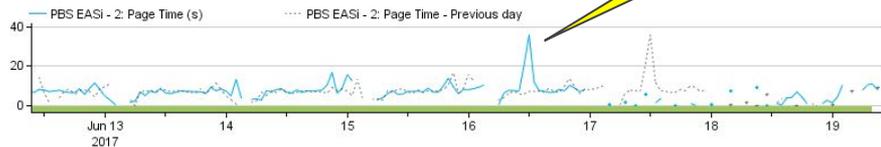
ARX Dashboard Example

EASi: End-User Experience ▼

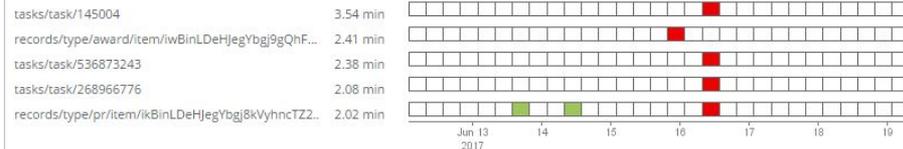
Alerts can be configured based on thresholds

Search Recent week    

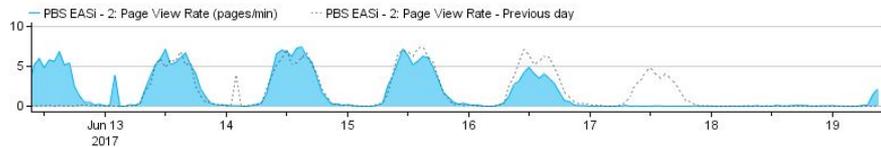
Page Time (s)



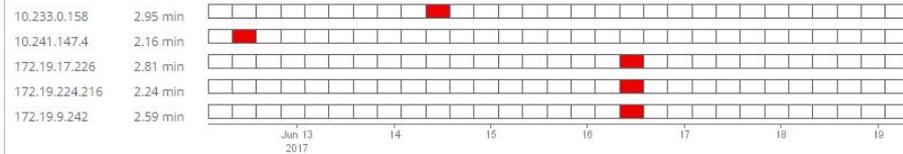
Slowest Page Families by Page Time (min)



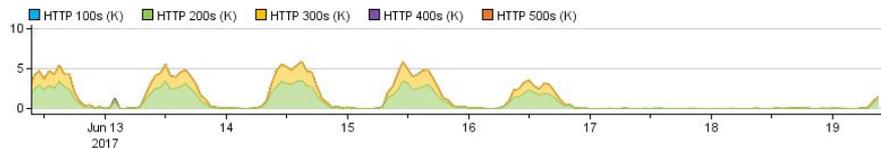
Page View Rate (pages/min)



Slowest Clients by Page Time (min)



HTTP Response Codes (K)



Slowest Users by Page Time (s)



Current Status

- Currently monitoring 26 PBS Applications
- Working with development teams to improve application code on several applications
- Testing a new module to detect performance issues in Java code, SQL, or web service transactions.